

## CLAIMS

I claim:

1        1.    A pipe inlet/outlet device, comprising a tubular body  
2        having a hollow neck portion defining a longitudinal axis, the  
3        neck portion having an open first end with an outside diameter  
4        adapted for fitting snugly in an inflow end of a pipe, and a  
5        rounded rim integral with and extending from the neck portion  
6        opposite the first end, the rim defining a mouth opening into  
7        the neck portion, the rim curving outward and rearward from the  
8        mouth and forming a skirt terminating in a lip, a recess being  
9        defined between the skirt and the neck portion.

1        2.    The pipe inlet/outlet device according to claim 1,  
2        wherein said neck portion is cylindrical, the mouth of the pipe  
3        inlet/outlet device being substantially circular, the recess  
4        being annular.

1        3.    The pipe inlet/outlet device according to claim 1,  
2        wherein the rim is rounded with a constant radius of curvature  
3        as viewed in a plane containing the longitudinal axis.

1        4.    The pipe inlet/outlet device according to claim 3,  
2 wherein the constant radius of curvature is about one-eighth of  
3 the outside diameter of the neck portion.

1        5.    The pipe inlet/outlet device of claim 1, wherein an  
2 inner surface of said pipe inlet/outlet device includes boundary  
3 layer turbulators.

1        6.    The pipe inlet/outlet device of claim 1, wherein an  
2 inner surface of said pipe inlet/outlet device defines a fluid  
3 pathway, said pipe inlet/outlet device further comprising a  
4 plurality of ribs extending into said fluid pathway for  
5 affecting fluid flow through said pipe inlet/outlet device.

1        7.    The pipe inlet/outlet device of claim 1, wherein an  
2 inner surface of said pipe inlet/outlet device defines a fluid  
3 pathway, said pipe inlet/outlet device having a plurality of  
4 grooves extending into said fluid pathway for affecting fluid  
5 flow through said pipe inlet/outlet device.

1        8.    The pipe inlet/outlet device of claim 1, wherein the  
2 mouth of the tubular body has a trumpet bell shape.

1        9.    The pipe inlet/outlet device according to claim 1,  
2        wherein the rim is rounded with a radius of curvature gradually  
3        decreasing from the mouth to the lip of said skirt as viewed in  
4        a plane containing the longitudinal axis, thereby defining a  
5        spiral shape.

1        10.   The pipe inlet/outlet device according to claim 1,  
2        wherein said tubular body is made from plastic.

1        11.   The pipe inlet/outlet device according to claim 1,  
2        wherein said tubular body is made from high density  
3        polyethylene.

1        12.   The pipe inlet/outlet device according to claim 1,  
2        wherein said tubular body is made from metal.

1        13.   The pipe inlet/outlet device according to claim 1,  
2        wherein the neck portion of said tubular body is dimensioned and  
3        configured for friction fit into an inflow end of a storm  
4        drainage pipe disposed in a tank.

1        14. A fluid handling system, comprising:  
2        a retention tank;  
3        a pipe extending from the retention tank, the pipe having  
4 an inflow end for receiving the fluid from the tank;  
5        a pipe inlet device having:  
6            a tubular body having a hollow, cylindrical neck  
7 portion defining a longitudinal axis, the neck portion  
8 having an open first end fitting snugly into the inflow end  
9 of the pipe, and a rounded rim integral with and extending  
10 from the neck portion opposite the first end, the rim  
11 defining a mouth opening into the neck portion, the rim  
12 curving outward and rearward from the mouth and forming a  
13 skirt terminating in a lip, an annular recess being defined  
14 between the skirt and the neck portion.

1        15. The fluid handling system according to claim 14,  
2 wherein the rim is rounded with a constant radius of curvature  
3 as viewed in a plane containing the longitudinal axis.

1        16. The fluid handling system according to claim 14,  
2 wherein the constant radius of curvature is about one-fourth of  
3 an inside radius of said pipe.

1           17.     The fluid handling system according to claim 14,  
2 wherein said tank is selected from the group consisting of a  
3 manhole and a catch basin.

1           18.     The fluid handling system according to claim 14,  
2 wherein said tubular body is made from high density  
3 polyethylene.

1           19.     A method of increasing a fluid handling capacity of a  
2 pipe, the method comprising the steps of:  
3         selecting a pipe inlet device comprising a neck portion  
4 having a neck portion adapted for fitting snugly in an inflow  
5 end of the pipe and a rounded rim integral with and extending  
6 from the neck portion opposite the first end, the rim defining a  
7 mouth opening into the neck portion, the rim curving outward and  
8 rearward from the mouth and forming a skirt terminating in a  
9 lip, a recess being defined between the skirt and the neck  
10 portion;  
11         attaching the pipe inlet device to the inflow end of the  
12 pipe.

1           20.     The method of increasing fluid handling capacity  
2 according to claim 19, wherein said attaching step further  
3 comprises the steps of:

4 applying adhesive to an outside of the neck portion; and  
5 inserting the neck portion into the inflow end of the pipe.